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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/136,483	08/19/98	KUMAR S	N19.12-0016

IM62/0229

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EXAMINER	
MARCHESCHI, M	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 02/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/136,483	Kumar et al.
Examiner	**Group Art Unit**
Michael Marcheschi	1755

☒ Responsive to communication(s) filed on *Dec 8, 1999* .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-3 and 5-22* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-3 and 5-22* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on *Jun 21, 1999* is ☒approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

The request filed on 12/8/99 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/136,483 is acceptable and a CPA has been established. An action on the CPA follows.

All claims are drawn to the same invention claimed in the parent application prior to the filing of this Continued Prosecution Application under 37 CFR 1.53(d) and could have been finally rejected on the grounds and art of record in the next Office action. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing under 37 CFR 1.53(d). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The disclosure is objected to because of the following informalities:

Throughout the specification applicants define application serial numbers and these should be updated to include the patent numbers, if appropriate,.

Claim 1-3 and 5-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the phrase "the primary particles" lacks antecedent basis since the limitation "primary particles" has not been **literally** defined before. The term "the" should be canceled from the above phrase.

The other claims are indefinite because they depend on indefinite claims.

Applicants are informed that claim 18 depends on the wrong claim. This claim should depend on claim 17.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-8 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over either **(1)** Sugoh et al., **(2)** Ota et al., **(3)** Arai et al, **(4)** Moser or **(5)** Helble et al. (708).

Sugoh et al. teach in the claims, alumina particles that can have a size of 0.1 micron.

Ota et al. teach in the abstract, alumina particles having a size of between 10-100 nm.

Arai et al. teach in column 2, lines 1-15 and column 3, line 47, alumina particles having a size of between 20-500 nm.

Moser teaches in column 5, lines 23-27, alumina particles having a size of between 1-30 nm.

Helble et al. (708) teach in claims 1-5, alumina particles having a size of less than 100 nm.

All the references teach alumina particles having a size within the claimed range and therefore no distinction is seen to exist because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. In addition, the broad interpretation of alumina defined by the references broadly encompasses any alumina form.

Claims 1-3, 5-16 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over either **(1)** Sakatani et al. alone or in view of Ueda et al. **(2)** Ueda et al., **(3)** Atsugi et al. alone or in view of Ueda et al., **(4)** Rosenblum alone or in view of Ueda et al., **(5)** Zipperian alone or in view of Ueda et al., **(6)** Rostoker (130) alone or in view of Ueda et al., **(7)** Rostoker et al. (194) alone or in view of Ueda et al. or **(8)** Neville et al. alone or in view of Ueda et al.

Sakatani et al. teach in the abstract and column 3, lines 40-41, a polish comprising at least one abrasive oxide selected from alumina and silica, wherein the size of the abrasive is between 0.1-1.5 microns.

Ueda et al. teach in the abstract and column 3, line 2, a polish comprising at least one abrasive oxide selected from alumina and silica, wherein the size of the abrasive is between 0.2-1 micron.

Atsugi et al. teach in column 3, lines 9-20, a polish comprising alumina having a size of 40 nm or less.

Rosenblum teach in column 2, lines 21-43, a polish comprising alumina having a size of between 0.05-1 micron. It is also shown that silica can be added to the polish.

Zipperian teach in the abstract and column 4, lines 25-30, a polish comprising a mixture of silica and alumina abrasives, wherein the alumina has a size or between 0.5-5 microns.

Rostoker (130) teach in the abstract, a polish comprising alumina having a size of between 20-200 nm.

Rostoker et al. (194) teach in column 4, lines 12-24, a polish comprising alumina or silica having a size of between 30-100 nm.

Neville et al. teach in the abstract, column 4, lines 45-47 and column 6, lines 6-10, a polish comprising a metal oxide abrasives (alumina or silica), wherein the abrasives have size less than 0.3 micron.

All the references teach polishes comprising alumina particles having a size within the claimed range and therefore no distinction is seen to exist because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. In addition, the broad interpretation of alumina defined by the references broadly encompasses any alumina form. With respect to the additional abrasive (silica) all the references except Atsugi et al., Rostoker (130), Rostoker et al. (194) and Neville et al. teach that silica can be used and therefore no distinction is seen to exist. Although the references set forth above fail to teach the use of this component, it is the examiners position that one skilled in the art would have found it obvious to use silica in combination with alumina in the above references because it is prima facie obvious to combine two or more materials disclosed by the prior art to form a third material that is to be used for the same purpose (i.e. a combination of abrasives). In re Kerkhoven 205 USPQ 1069. Finally, with respect to the use of a nonaqueous solvent as the dispersing medium, it is the examiners position that, in any of the references that fail to disclose this feature, said feature is an obvious modification thereof and one skilled in the art would have routinely known that either water or another solvent (nonaqueous) can be used as the dispersing medium. In the alternative, Ueda et al. teach in column 4, lines 40-43 that this concept is well known (either medium can be used).

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimo.

Shimo teaches in column 5, lines 11-18, column 8, lines 18-21 and the claims, a process for making a metal oxide having a size less than 0.3 micron comprising laser pyrolysis of a mixture of an organometallic precursor (aluminum) and an oxygen containing compound.

The reference teaches a method of making aluminum oxide which comprises all of the claimed steps and therefore no significant difference is seen to exist in the absence of any evidence showing the contrary. With respect to the oxygen containing compound, it is the examiners position that the broad interpretation of this compound can be (act as) both an oxidizer and absorber (i.e. ozone) and therefore no distinction is seen to exist. With respect to the size of the oxide, the reference teaches sizes within the claimed range and therefore no distinction is seen to exist because the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either **(1)** Sugoh et al., **(2)** Ota et al., **(3)** Arai et al, **(4)** Moser, **(5)** Helble et al. (708), **(6)** Sakatani et al., **(7)** Ueda et al., **(8)** Atsugi et al., **(9)** Rosenblum, **(10)** Zipperian, **(11)** Rostoker (130), **(12)** Rostoker et al. (194), or **(13)** Neville et al. as applied to claim 1 above, and further in view of Shimo.

It is the examiners position that it would have been obvious to make the aluminum oxide particles defined by any of the above references by the method disclosed by Shimo because Shimo teaches a well known conventional way to make aluminum oxide particles. In view of this, one skilled in the art would have found it extremely obvious to manufacture aluminum oxide particles using **any** conventional method and therefore no distinction is seen to exist.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Pending

Claims 1-3, 5-16 and 19-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5-9 and 11-16 of copending Application No. 08/961,735. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the claims according to the copending application would render obvious the instant claims. Although the claims according to the copending application do not set forth the specific abrasive particles in the polish, the broad interpretation of the claims encompasses any and all well known abrasive particles used

in polishes. In view of this, it is the examiners position that alumina and silica are encompassed by the broad claims in the absence of any evidence showing the contrary

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

"A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

Applicant's arguments filed 11/9/99 have been fully considered but they are not persuasive.

Applicants argue that all the references fail to disclose the claimed narrow particle sizes. Although some of the references might not disclose the claimed narrow range, these references teach broad particles size ranges which overlap the instantly claimed ranges and it is well known that overlapping ranges are obvious **(the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges**

have been held to be a *prima facie case of obviousness*, see *In re Malagari*, 182 U.S.P.Q. 549). Numerous other applied references teach that the particle size is below 500 nm which is within applicants upper limit and therefore no distinction is seen to exist. In addition, applicants argue that the specific claimed distribution (lines 4-6 of claim 1 and lines 3-6 of claim 19) is not defined by the references. The examiner acknowledges that the specific distribution might not be literally defined, but it is the examiners position that from the particles size ranges defined by the reference, these specific distributions can be apparent. In other words, the ranges defined by the references imply a variety of distributions, including the claimed ones. **In view of this, all of the claimed limitations are suggested or apparent.** Applicants also argue that the references do not define the "tail" limitation. Again, the sizes overlap the claimed sizes and therefore a prima facie case of obviousness has been established. Applicants also apparently argue that the figures and/or the examples of some of the references do not disclose the claimed invention. Although this might be true, **"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.**

Applicants also argue that the particle size distribution of Rostoker et al. (194) is a gaussian distribution with a corresponding large tail. Applicants have not provided any evidence to support this. The conventional definition of a gaussian distribution is that the distribution curve has the shape of a normal probability curve (bell curve). This definition does not set forth that the distribution has a large tail. To support applicants contention, a reference directed to Siegel et al. is supplied. The examiner fails to see the relevance of this article and how it can be used to support applicants argument.

Since applicants have not provided any evidence (data) showing that the claimed size range is superior and provides unexpected results when compared to the size ranges disclosed by the prior art, no patentable distinction is seen to exist.

Applicants argue that Shimo does not teach the instantly claimed process because the reference uses a laser pulse. The examiner fails to see applicants argument because the reference process entails laser pyrolysis of a mixture of an organometallic precursor (aluminum) and an oxygen containing compound. Since the claimed process is directed to laser pyrolysis of a molecular stream (i.e. alumina precursor) and an oxygen containing compound (encompasses both an oxidizing agent and infrared absorber), it can be seen that the two processes are the same or reasonably similar (obvious modification thereof). Laser pyrolysis encompasses the use of continous waves in the absence of any evidence showing the contrary. Since applicants have not provided any distinguishing factor between the two processes, no distinction is seen to exist. Applicants also argue that the reference does not teach the production of alumina particles. The

examiner fails to see this argument because it is specifically stated in column 5, line 10-20 that an aluminum reactant can be used (i.e. thus inherently producing alumina). Although this is not exemplified, **"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.**

With respect to the combination rejection of claims 17 and 18, applicants fail to argue the reasons for combining as set forth in the previous office action. The examiner acknowledges that all of the references (excluding Shimo) fail to teach laser pyrolysis, hence the reasons for the combination. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants argue the ODP rejection because the copending application fails to disclose the distribution set forth in claim 1. Although this is feature is not literally defined, it is the examiners position that from the particles size ranges defined by the copending application, this specific distribution can be apparent. In other words, the ranges defined by the copending application imply a variety of distributions, including the claimed ones.

The drawing corrections filed 6/21/99 are approved by the examiner.

In the absence of a declaration showing unexpected results, the examiner fails to see any patentable distinction between the claimed invention and the references.

NOTE:

The declaration needs to show unexpected results with respect to some kind of property. Since the claims are directed to "a collection of particles", the examiner is unaware as to how evidence can be shown (what the unexpected property will be). It is suggested that the claims be directed to a polish and the unexpected results show a difference in the polishing properties.

To advance prosecution (make this action final), the examiner has not made an ODP rejection over the CIP application (09/433,202). Although a rejection has not been made, it is suggested that a TD be submitted over the copending application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Marcheschi whose telephone number is (703) 308-3815. The examiner can be normally be reached on Monday through Thursday between the hours of 8:30-6:00 and every other Friday between the hours of 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Mark L. Bell, can be reached at (703) 308-3823.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Michael Marcheschi
Art unit 1755
2/00

MICHAEL MARCHESCHI
PRIMARY EXAMINER